

January 30, 2015



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue, Southeast
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 11803
(ELEVENTH REVISION)

EXPIRATION DATE: December 31, 2018

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Chart, Inc.
Distribution and Storage Group
New Prague, MN
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the manufacture, mark, sale and use of DOT Specification 113A90W tank cars for the transportation in commerce of certain non-flammable cryogenic liquids listed in paragraph 6 below. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.203(a) in that marking the special permit number on the shipping papers is waived and §§ 173.319, and 179.401-1 as modified herein.
5. BASIS: This special permit is based on the application of Chart, Inc., dated December 22, 2014 submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Argon, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1951	N/A
Nitrogen, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1977	N/A
Oxygen, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1073	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING: Prescribed packagings are DOT Specification 113A90W tank cars. Grantee shall provide a tabulated list of all cars produced since the issuance of the Special Permit at each renewal. Tabulated list shall include reporting marks and car numbers. AAR Certificate of Construction Number, manufacturer's model number and GRL. Additional cars may be produced and shall be identified in the table at the next renewal of the Special Permit. The cars comply with the following:

(1) Each pressure relief device must meet the requirements of the AAR Specification for Tank Cars, Appendix A, A8.07(a).

(2) Each tank car must be designed and constructed with the following individual specification requirements:

DOT Specification	113A90W
Design service temperature	-320°F
Material	§ 179.400-5
Impact test (weld and plate material)	§ 179.400-5 (c)
Impact test values	§ 179.400-5 (d)
Standard heat transfer rate (Btu per day per lb. Of water capacity, max) (see § 179.400-4)	5.8
Burst Pressure, minimum psi	240
Minimum shell thickness, inches [see § 179.400-7(a)]	3/16"
Minimum head thickness, inches [see § 179.400-7(a), (b) and (c)]	3/16"
Test pressure, psi (see § 179.400-18)	90
Safety vent bursting pressure, maximum psi	90
Pressure relief valve start-to-discharge pressure, psi (± 3 psi)	60
Pressure relief valve vapor tight pressure, min. psi	48
Pressure relief valve flow rating pressure, max. psi	66
Alternate pressure relief valve start-to-discharge pressure, psi (± 3 psi)	72
Alternate pressure relief valve vapor tight pressure min. psi	58
Alternate pressure relief valve flow rating pressure, max. psi	80
Pressure control valve	optional up to 60 psig

(3) The normal evaporation rate test specified in § 179.400-4 must be conducted on the first tank car of each specific design.

(4) Prior to manufacturing, the applicant must secure approval in accordance with § 179.3.

b. TESTING

(1) Each tank car operating under the terms of this special permit must be tested in accordance with § 179.400-18 at the time of construction.

(2) Retest of the pressure relief devices must be conducted in accordance with § 173.319(e)(4) and (5).

(3) Each loaded tank car must be examined prior to offering and must have a demonstrated thermal performance history that indicates that it is not likely to vent during transit. Such performance history may include: annular vacuum space reading of 300 microns or less, average daily pressure rise data from previous trips, monitor vacuum at Preventive Maintenance inspections that are scheduled periodically and where an abnormal pressure rise if the indicator that vacuum has been compromised. Other performance evaluation methods must be approved by the Associate Administrator for Railroad Safety

c. FILLING - Each tank car operating under the terms of this special permit must be filled in accordance with the following table:

Maximum set-to-discharge pressure (psig)	Maximum permitted filling density (percent by weight)		
	Argon	Oxygen	Nitrogen
605525	126%	104%	72%
	127.2%	104%	73%
	132%	108%	76%
Design service temperature	-320°F	-320°F	-320°F

8. SPECIAL PROVISIONS:

a. The marking requirements of § 172.203(a) are waived.

b. MARKING - Each tank car operating under the terms of this special permit must be marked "DOT-SP 11803" in letters and numerals at least 4 inches high on a contrasting background near the DOT specification markings.

c. Evaporation control equipment, as specified in § 179.400-20(c)(4), is optional. Mixing devices are not required under the terms of this special permit.

d. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

e. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.

f. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

g. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.

9. MODES OF TRANSPORTATION AUTHORIZED. Rail freight.

10. MODAL REQUIREMENTS: The grantee must notify the Federal Railroad Administration of any unusual incident or incidents known to it that occur during the movement of cars built under this special permit. This includes adverse findings related to corrosion of the tank shell or head found during regular external inspections. FRA may be contacted at:

Federal Railroad Administration
Hazardous Materials Division
RRS-12/Mail Stop 25
1200 New Jersey Avenue, SE
Washington, DC 20590
ATTN: Karl Alexy, Staff Director
202-493-6245, FAX: 202-493-6478
John.Alexy@dot.gov

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8 who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when the special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)- 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials

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incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-31.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/special_permit Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: KAlaxy:TG